

PROBABILISTIC HYDROLOGIC OUTLOOK  
NATIONAL WEATHER SERVICE DES MOINES IA  
312 PM CST THU FEB 18 2016

...SPRING FLOOD AND WATER RESOURCES OUTLOOK...

THIS FLOOD OUTLOOK IS FOR THE NWS DES MOINES SERVICE AREA. IT COVERS THE TIME PERIOD FOR LATE FEBRUARY THROUGH LATE MAY 2016. IT INCLUDES THE FOLLOWING RIVERS AND THEIR TRIBUTARIES IN NORTH CENTRAL...CENTRAL AND SOUTH CENTRAL IOWA...

IOWA...CEDAR...SKUNK...DES MOINES...RACCOON...NISHNABOTNA...  
102...THOMPSON AND CHARITON RIVERS

...FLOOD OUTLOOK HIGHLIGHTS...

- \* THE RISK OF MINOR RIVER FLOODING IS ABOVE TO MUCH ABOVE NORMAL...GENERALLY NORTH OF INTERSTATE 80...FROM LATE WINTER INTO SPRING. THE RISK OF MINOR RIVER FLOODING SOUTH OF INTERSTATE 80 IS GENERALLY NEAR NORMAL. THE RISK OF MODERATE AND MAJOR RIVER FLOODING IS GENERALLY NEAR NORMAL AT ALL LOCATIONS.
- \* FLOODING FROM ICE JAMS IS POSSIBLE IN LOCATIONS WHERE RIVER ICE IS SEVERAL INCHES THICK AND COVERS MOST OF THE STREAM. THESE CONDITIONS ARE MOST LIKELY TO EXIST GENERALLY FROM U.S. HIGHWAY 20 NORTHWARD.
- \* THE ABOVE NORMAL SNOW PACK ACROSS THE NORTHERN HALF OF IOWA AS WELL AS ABOVE TO MUCH ABOVE NORMAL STREAMFLOWS...COMBINED WITH ANTICIPATED SNOWMELT OVER THE NEXT SEVERAL DAYS...WILL RESULT IN AN INCREASED SHORT-TERM FLOOD RISK. THIS INCREASED SHORT-TERM FLOOD RISK IS HELPING TO ELEVATE THE OVERALL LONG-TERM FLOOD RISK INDICATED IN THIS OUTLOOK. HOWEVER...ONCE THE EXISTING SNOW PACK MELTS SIGNIFICANTLY...A LACK OF ADDITIONAL ABOVE NORMAL PRECIPITATION WOULD MAKE THE OVERALL RISK OF SPRING FLOODING LESS THAN INDICATED IN THIS OUTLOOK.
- \* A CONSIDERABLE AMOUNT OF THE WINTER SEASON REMAINS. THUS...IT IS IMPORTANT TO CONTINUE MONITORING WEATHER AND RIVER CONDITIONS...AS WELL AS FUTURE OUTLOOKS...FOR ANY CHANGES TO THE FLOOD THREAT. ANY FUTURE PRECIPITATION...AS WELL AS CHANGES TO RIVER OR OTHER WEATHER CONDITIONS...MAY INCREASE OR DECREASE THE RISK OF FLOODING.
- \* MAPS AND GRAPHICS CONCERNING THE RISK OF FLOODING IS AVAILABLE ON THE NWS DES MOINES ADVANCED HYDROLOGIC PREDICTION SERVICE WEB PAGE AT... [HTTP://WATER.WEATHER.GOV/AHPS2/INDEX.PHP?WFO=DMX](http://water.weather.gov/ahps2/index.php?wfo=DMX) . ON THAT PAGE CLICK ON THE TAB ABOVE THE MAP LABELED EXPERIMENTAL LONG-RANGE FLOOD RISK.



CEDAR FALLS	88.0	90.0	93.0	:	>95	50	87	41	27	16
:BLACK HAWK CREEK										
HUDSON	14.0	15.0	19.0	:	70	40	28	21	<5	<5
:CEDAR RIVER										
WATERLOO	13.0	19.0	21.0	:	69	32	11	6	6	<5
:IOWA RIVER										
ROWAN	12.5	15.0	17.0	:	30	16	<5	<5	<5	<5
MARSHALLTOWN	19.0	23.0	26.0	:	21	8	<5	<5	<5	<5
:SOUTH SKUNK RIVER										
AMES W RIVERSIDE	12.5	16.0	16.5	:	<5	<5	<5	<5	<5	<5
:SQUAW CREEK										
AMES LINCOLN WAY	10.0	14.0	15.5	:	9	11	<5	<5	<5	<5
:SOUTH SKUNK RIVER										
AMES US 30	21.5	23.5	24.5	:	11	13	<5	<5	<5	<5
COLFAX	18.0	19.0	21.0	:	18	16	10	9	<5	<5
OSKALOOSA	24.5	28.5	30.0	:	<5	<5	<5	<5	<5	<5
:EAST FORK DES MOINES RIVER										
ALGONA	17.0	18.0	22.0	:	43	17	21	11	<5	<5
DAKOTA CITY	20.0	24.0	28.0	:	7	6	<5	<5	<5	<5
:BOONE RIVER										
WEBSTER CITY	14.0	17.0	19.0	:	<5	<5	<5	<5	<5	<5
:BEAVER CREEK										
GRIMES	14.0	16.0	17.0	:	<5	<5	<5	<5	<5	<5
:NORTH RACCOON RIVER										
JEFFERSON	19.0	21.0	23.0	:	11	5	<5	<5	<5	<5
PERRY	15.0	18.0	20.0	:	86	47	46	28	20	16
:SOUTH RACCOON RIVER										
REDFIELD	20.0	24.0	27.0	:	<5	<5	<5	<5	<5	<5
:RACCOON RIVER										
VAN METER	17.0	22.0	23.0	:	28	18	<5	<5	<5	<5
DES MOINES IA 28	36.0	38.0	40.0	:	25	17	6	<5	<5	<5
DES MOINES FLEUR	12.0	16.0	25.0	:	77	49	25	19	<5	<5
:NORTH RIVER										
NORWALK	22.0	25.0	26.0	:	15	19	<5	<5	<5	<5
:MIDDLE RIVER										
INDIANOLA	23.0	26.0	28.0	:	7	10	<5	<5	<5	<5
:SOUTH RIVER										
ACKWORTH	29.0	30.0	32.0	:	<5	<5	<5	<5	<5	<5
:CEDAR CREEK										
BUSSEY	25.0	30.0	32.0	:	<5	<5	<5	<5	<5	<5
:WEST FORK DES MOINES RIVER										
ESTHERVILLE	8.0	13.0	14.5	:	95	42	9	9	<5	<5
EMMETSBURG	11.0	13.0	15.0	:	41	17	13	11	<5	<5
HUMBOLDT	10.0	13.0	14.0	:	34	22	<5	<5	<5	<5
:DES MOINES RIVER										
FORT DODGE	10.5	16.0	17.0	:	50	27	<5	<5	<5	<5
STRATFORD	21.0	25.0	27.0	:	18	8	<5	<5	<5	<5
DES MOINES 2ND AV	23.0	26.0	30.0	:	5	<5	<5	<5	<5	<5
DES MOINES SE 6TH	24.0	26.0	30.0	:	80	52	28	21	6	<5
EDDYVILLE	61.0	68.0	70.0	:	75	47	<5	<5	<5	<5

OTTUMWA	11.0	15.0	19.0	:	56	33	6	<5	<5	<5
:THOMPSON RIVER										
DAVIS CITY	12.0	20.0	24.0	:	13	13	<5	<5	<5	<5
:SOUTH FORK CHARITON RIVER										
PROMISE CITY	25.0	28.0	31.0	:	<5	<5	<5	<5	<5	<5
:CHARITON RIVER										
CHARITON	19.5	26.0	29.0	:	<5	<5	<5	<5	<5	<5
MOULTON	36.0	37.0	38.0	:	<5	<5	<5	<5	<5	<5
:EAST NISHNABOTNA RIVER										
ATLANTIC	19.0	23.0	24.0	:	10	6	<5	<5	<5	<5
:EAST FORK 102 RIVER										
BEDFORD	24.0	25.0	26.0	:	<5	<5	<5	<5	<5	<5

#### LEGEND

CS = CONDITIONAL SIMULATION /CURRENT OUTLOOK/

HS = HISTORICAL SIMULATION

FT = FEET

IN TABLE 2 BELOW...THE 95 THROUGH 5 PERCENT COLUMNS INDICATE THE PROBABILITY OF EXCEEDING THE LISTED STAGE LEVELS /FT/ FOR THE VALID TIME PERIOD. REFER TO TABLE 1 FOR THE FLOOD STAGES FOR EACH LOCATION.

...TABLE 2--EXCEEDANCE PROBABILITIES...

LOCATION	CHANCE OF EXCEEDING STAGES AT SPECIFIC LOCATIONS						
	VALID PERIOD: 02/21/2016 - 05/21/2016						
	95%	90%	75%	50%	25%	10%	5%
:CEDAR RIVER							
JANESVILLE	6.2	6.6	7.7	9.1	11.2	13.1	15.1
:WEST FORK CEDAR RIVER							
FINCHFORD	12.8	13.0	13.8	14.5	15.3	16.9	17.8
:WINNEBAGO RIVER							
MASON CITY	6.1	6.7	7.2	7.9	8.8	11.2	18.9
:SHELL ROCK RIVER							
SHELL ROCK	11.3	11.7	12.1	12.7	13.5	14.7	16.5
:BEAVER CREEK							
NEW HARTFORD	8.2	8.3	9.6	10.5	11.6	13.3	13.9
:CEDAR RIVER							
CEDAR FALLS	89.0	89.7	90.7	91.8	93.3	95.0	97.4
:BLACK HAWK CREEK							
HUDSON	12.9	13.3	13.9	14.6	15.1	15.6	16.0
:CEDAR RIVER							
WATERLOO	11.0	11.6	12.7	13.9	16.0	19.4	22.2
:IOWA RIVER							
ROWAN	10.7	10.9	11.4	11.9	12.7	13.4	14.1
MARSHALLTOWN	16.6	16.9	17.2	18.0	18.8	19.7	20.9

:SOUTH SKUNK RIVER							
AMES W RIVERSIDE	6.8	7.1	7.7	8.7	10.2	11.2	11.6
:SQUAW CREEK							
AMES LINCOLN WAY	4.5	4.9	5.6	6.6	7.6	9.5	11.8
:SOUTH SKUNK RIVER							
AMES US 30	15.5	15.8	16.9	18.5	20.1	21.9	23.2
COLFAX	11.8	12.2	13.8	15.4	17.5	19.0	20.1
OSKALOOSA	13.9	15.4	17.1	18.9	20.7	21.9	23.1
:EAST FORK DES MOINES RIVER							
ALGONA	15.2	15.5	16.2	16.9	17.7	18.7	19.6
DAKOTA CITY	13.9	14.1	15.1	15.9	17.5	19.6	21.5
:BOONE RIVER							
WEBSTER CITY	7.5	7.8	8.6	9.3	10.5	11.5	12.5
:BEAVER CREEK							
GRIMES	6.3	7.0	9.0	10.6	12.0	12.8	13.4
:NORTH RACCOON RIVER							
JEFFERSON	11.5	12.2	13.2	15.0	16.8	19.2	20.0
PERRY	13.7	14.6	16.1	17.6	19.4	22.3	23.8
:SOUTH RACCOON RIVER							
REDFIELD	5.9	6.7	8.2	9.8	11.8	15.1	19.5
:RACCOON RIVER							
VAN METER	10.5	11.3	13.8	15.7	17.7	19.9	21.4
DES MOINES IA 28	30.2	31.0	33.4	34.5	36.1	37.4	38.8
DES MOINES FLEUR	8.6	9.4	12.2	14.0	16.1	17.9	19.2
:NORTH RIVER							
NORWALK	10.6	13.7	16.2	18.8	21.1	22.3	22.5
:MIDDLE RIVER							
INDIANOLA	10.3	12.2	14.3	15.8	17.5	20.9	23.7
:SOUTH RIVER							
ACKWORTH	8.8	9.7	11.7	13.0	15.9	22.0	24.7
:CEDAR CREEK							
BUSSEY	9.1	10.8	12.6	14.4	16.2	19.3	20.4
:WEST FORK DES MOINES RIVER							
ESTHERVILLE	8.0	8.6	9.1	10.2	12.0	12.9	13.5
EMMETSBURG	7.6	8.1	8.8	10.2	12.0	13.4	13.7
HUMBOLDT	7.6	8.0	8.7	9.3	10.6	11.4	12.6
:DES MOINES RIVER							
FORT DODGE	8.6	9.1	9.6	10.5	11.7	13.6	14.9
STRATFORD	14.1	14.9	16.4	17.8	19.5	22.0	23.6
DES MOINES 2ND AV	18.2	18.3	19.2	19.6	20.1	21.8	23.1
DES MOINES SE 6TH	22.3	22.7	24.4	25.4	26.4	29.1	30.5
EDDYVILLE	59.4	60.3	61.0	61.6	62.1	62.8	64.2
OTTUMWA	8.5	9.4	10.0	11.3	12.1	13.4	16.5
:THOMPSON RIVER							
DAVIS CITY	4.4	4.7	6.4	8.2	9.5	12.9	13.5
:SOUTH FORK CHARITON RIVER							
PROMISE CITY	6.9	8.8	12.9	18.1	19.8	21.8	22.1
:CHARITON RIVER							
CHARITON	12.6	13.7	15.6	16.7	18.0	18.6	19.0
MOULTON	26.0	26.0	27.4	29.6	33.9	34.7	35.1

:EAST NISHNABOTNA RIVER							
ATLANTIC	5.4	6.2	9.3	13.5	16.7	19.0	20.5
:EAST FORK 102 RIVER							
BEDFORD	14.1	15.3	16.4	17.9	19.6	21.3	22.5

IN TABLE 3 BELOW...THE 95 THROUGH 5 PERCENT COLUMNS INDICATE THE PROBABILITY OF FALLING BELOW THE LISTED STAGE LEVELS /FT/ FOR THE VALID TIME PERIOD. REFER TO TABLE 1 FOR THE FLOOD STAGES FOR EACH LOCATION.

...TABLE 3--NON-EXCEEDANCE PROBABILITIES...

LOCATION	CHANCE OF FALLING BELOW STAGES AT SPECIFIC LOCATIONS VALID PERIOD: 02/21/2016 - 05/21/2016						
	95%	90%	75%	50%	25%	10%	5%
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:CEDAR RIVER							
JANESVILLE	1.8	1.7	1.6	1.6	1.5	1.4	1.4
:WEST FORK CEDAR RIVER							
FINCHFORD	7.4	7.2	6.9	6.8	6.7	6.6	6.6
:WINNEBAGO RIVER							
MASON CITY	3.6	3.6	3.6	3.6	3.5	3.5	3.5
:SHELL ROCK RIVER							
SHELL ROCK	8.4	8.2	8.2	8.1	8.1	8.1	8.0
:BEAVER CREEK							
NEW HARTFORD	4.1	3.8	3.6	3.5	3.4	3.3	3.2
:CEDAR RIVER							
CEDAR FALLS	79.9	79.7	79.3	79.2	79.1	79.0	79.0
:BLACK HAWK CREEK							
HUDSON	6.4	6.3	6.1	5.8	5.6	5.5	5.3
:CEDAR RIVER							
WATERLOO	6.6	6.4	6.2	6.1	6.0	6.0	6.0
:IOWA RIVER							
ROWAN	4.2	4.2	4.2	4.1	4.0	3.9	3.8
MARSHALLTOWN	10.9	10.7	10.5	10.4	10.3	10.1	10.1
:SOUTH SKUNK RIVER							
AMES W RIVERSIDE	3.9	3.8	3.7	3.4	3.2	3.1	3.1
:SQUAW CREEK							
AMES LINCOLN WAY	2.2	2.1	2.0	1.9	1.8	1.7	1.7
:SOUTH SKUNK RIVER							
AMES US 30	10.9	10.6	10.4	9.8	9.4	9.1	9.0
COLFAX	8.8	8.6	8.4	8.1	7.8	7.6	7.5
OSKALOOSA	10.6	10.1	9.5	9.0	8.3	7.6	7.5
:EAST FORK DES MOINES RIVER							
ALGONA	7.7	7.7	7.6	7.6	7.5	7.4	7.4
DAKOTA CITY	8.5	8.5	8.5	8.3	8.2	8.1	8.1
:BOONE RIVER							
WEBSTER CITY	2.7	2.6	2.4	2.3	2.2	2.1	2.1
:BEAVER CREEK							

GRIMES	4.3	4.3	3.9	3.6	3.3	3.1	3.0
:NORTH RACCOON RIVER							
JEFFERSON	6.3	6.2	5.9	5.7	5.5	5.3	5.2
PERRY	7.0	6.7	6.2	5.8	5.4	5.0	4.8
:SOUTH RACCOON RIVER							
REDFIELD	3.6	3.5	3.3	3.2	3.0	2.9	2.8
:RACCOON RIVER							
VAN METER	6.1	5.9	5.6	5.2	5.0	4.6	4.4
DES MOINES IA 28	24.6	24.4	24.0	23.5	23.2	22.8	22.6
DES MOINES FLEUR	3.1	2.8	2.4	1.8	1.5	1.0	0.9
:NORTH RIVER							
NORWALK	8.1	7.8	7.4	6.8	6.3	6.1	6.0
:MIDDLE RIVER							
INDIANOLA	7.6	7.5	7.2	6.9	6.7	6.6	6.5
:SOUTH RIVER							
ACKWORTH	6.8	6.5	6.2	6.0	5.8	5.7	5.6
:CEDAR CREEK							
BUSSEY	6.1	6.0	5.8	5.7	5.6	5.5	5.4
:WEST FORK DES MOINES RIVER							
ESTHERVILLE	3.5	3.4	3.2	3.1	3.0	2.9	2.9
EMMETSBURG	2.4	2.2	2.1	2.0	1.9	1.7	1.6
HUMBOLDT	4.5	4.4	4.2	4.0	3.9	3.8	3.8
:DES MOINES RIVER							
FORT DODGE	5.4	5.1	4.9	4.6	4.5	4.3	4.3
STRATFORD	8.1	7.9	7.1	6.7	6.5	6.2	6.2
DES MOINES 2ND AV	14.6	14.5	14.2	14.0	13.9	13.7	13.6
DES MOINES SE 6TH	15.8	15.2	14.3	13.6	12.9	12.5	12.0
EDDYVILLE	55.0	54.1	53.0	51.8	50.7	50.1	49.8
OTTUMWA	5.4	4.8	4.1	3.4	2.8	2.5	2.3
:THOMPSON RIVER							
DAVIS CITY	1.7	1.5	1.3	1.0	0.6	0.6	0.6
:SOUTH FORK CHARITON RIVER							
PROMISE CITY	3.8	3.8	3.7	3.6	3.5	3.5	3.5
:CHARITON RIVER							
CHARITON	6.0	5.9	5.7	5.6	5.5	5.4	5.3
MOULTON	23.0	22.4	21.1	19.9	19.9	19.8	19.8
:EAST NISHNABOTNA RIVER							
ATLANTIC	3.1	3.0	2.9	2.7	2.5	2.4	2.4
:EAST FORK 102 RIVER							
BEDFORD	10.8	10.8	10.8	10.7	10.7	10.7	10.7

THESE NUMBERS ARE CALCULATED USING MULTIPLE SPRING SEASON SCENARIOS FROM 30 OR MORE YEARS OF CLIMATOLOGICAL DATA. THESE NUMBERS ALSO TAKE INTO ACCOUNT CURRENT CONDITIONS OF THE RIVER...SNOW COVER AND SOIL MOISTURE...AS WELL AS 30 TO 90 DAY OUTLOOKS OF TEMPERATURE AND PRECIPITATION. BY PROVIDING THE COMPLETE RANGE OF PROBABILISTIC NUMBERS...THE LEVEL OF RISK ASSOCIATED WITH LONG-RANGE PLANNING DECISIONS CAN BE DETERMINED.

...CURRENT CONDITIONS AS OF FEBRUARY 18TH 2016...

- \* SNOW PACK...THE SNOW PACK IS ABOVE NORMAL ACROSS THE NORTHERN HALF OF IOWA. WATER EQUIVALENT OF THE SNOW PACK IS AS HIGH AS 2 TO 4 INCHES...MAINLY NORTH OF U.S. HIGHWAY 20. LITTLE IF ANY SNOW PACK EXISTS ACROSS THE SOUTHERN HALF OF THE STATE.
- \* SOIL MOISTURE...SOIL MOISTURE IS ABOVE TO MUCH ABOVE NORMAL ACROSS THE WESTERN HALF OF IOWA...AND NEAR-RECORD HIGH VALUES EXIST IN SOME LOCATIONS. ELSEWHERE...SOIL MOISTURE IS GENERALLY NEAR TO ABOVE NORMAL.
- \* FROST DEPTH...GROUND FROST IS EITHER SHALLOW OR NON-EXISTENT STATEWIDE. FOUR-INCH SOIL TEMPERATURES ARE GENERALLY IN THE 31 TO 33F DEGREE RANGE.
- \* STREAM FLOWS...STREAM FLOWS ARE GENERALLY ABOVE TO MUCH ABOVE NORMAL. A FEW LOCATIONS IN SOUTHERN IOWA ARE NEAR NORMAL.
- \* DROUGHT CONDITIONS...DROUGHT CONDITIONS DO NOT EXIST ACROSS IOWA.

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ZOGG